

Title (en)  
Inhibitors de serine proteases, especially of the NS3 protease of the hepatitis C virus

Title (de)  
Inhibitoren von Serinproteasen, insbesondere von NS3-Protease des Hepatitis-C-Virus

Title (fr)  
Inhibiteurs de protéases, spécialement de la protéase ns3 du virus de l'hépatite c

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Application  
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Abstract (en)  
[origin: WO9817679A1] The present invention relates to compounds, methods and pharmaceutical compositions for inhibiting proteases, particularly serine proteases, and more particularly HCV NS3 proteases. The compounds, and the compositions and methods that utilize them, can be used, either alone or in combination to inhibit viruses, particularly HCV virus.

IPC 8 full level  
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Citation (search report)  
• [X] WO 9535308 A1 19951228 - VERTEX PHARMA [US]  
• [A] WO 9325574 A1 19931223 - PFIZER [US], et al  
• [X] EP 0363284 A2 19900411 - MERRELL DOW PHARMA [US]  
• [X] EP 0195212 A2 19860924 - MERRELL DOW PHARMA [US]  
• [X] EP 0368719 A2 19900516 - MERRELL DOW PHARMA [US]  
• [X] EP 0356595 A1 19900307 - MERRELL DOW PHARMA [US]  
• [X] EP 0275101 A2 19880720 - MERRELL DOW PHARMA [US]  
• [X] EP 0639585 A1 19950222 - BANYU PHARMA CO LTD [JP], et al  
• [X] EP 0296581 A2 19881228 - SQUIBB & SONS INC [US]  
• [X] S MEHDI ET AL.: "The inhibition of human neutrophil elastase and cathepsin C by peptidyl 1,2-dicarbonyl derivatives", BIOCHEMICAL AND BIOPHYSICAL RESEARCH COMMUNICATIONS., vol. 166, no. 2, 30 January 1990 (1990-01-30), ORLANDO, FL US, pages 595 - 600, XP000085857  
• [X] M R ANGELASTRO ET AL.: "Alpha-diketone and alpha-ketoester derivatives of N-protected amino acids and peptides as novel inhibitors of cysteine and serine proteases", JOURNAL OF MEDICINAL CHEMISTRY, vol. 33, no. 1, 1990, American Chemical Society, pages 11 - 13, XP002058114, ISSN: 0022-2623  
• [X] M R ANGELASTRO ET AL.: "An efficient synthesis of Alpha-diketone and alpha-ketoester derivatives of N-protected amino acids and peptides", JOURNAL OF ORGANIC CHEMISTRY, vol. 54, no. 16, 1989, ACS, pages 3913 - 3916, XP000944450, ISSN: 0022-3263

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DOCDB simple family (application)  
**US 9718968 W 19971017**; AP 9901512 A 19971017; AT 97946273 T 19971017; AU 5147798 A 19971017; BG 10339299 A 19990511; BR 9712544 A 19971017; CA 2268391 A 19971017; CN 97180151 A 19971017; CZ 134099 A 19971017; DE 69709671 T 19971017; DK 97946273 T 19971017; EA 199900388 A 19971017; EE 9900161 A 19971017; EP 10013053 A 19971017; EP 10013054 A 19971017; EP 97946273 A 19971017; ES 97946273 T 19971017; GE AP1997004759 A 19971017; HK 00100690 A 20000203; HU P0000152 A 19971017; ID 990198 A 19971017; IL 12940797 A 19971017; IL 12940799 A 19990413; IL 19190508 A 20080603; IN 1951CA1997 A 19971017; IS 5028 A 19990415; JP 2007290832 A 20071108; JP 2010279518 A 20101215; JP 51956898 A 19971017; KR 19997003372 A 19990417; MX PA05003026 A 19971017; NO 20100145 A 20100129; NO 991832 A 19990416; NZ 33527697 A 19971017; PL 33287297 A 19971017;

PL 37233397 A 19971017; PT 97946273 T 19971017; SK 51099 A 19971017; TR 9901602 T 19971017; TW 86115382 A 19971018;  
UA 20031212227 A 19971017; UA 99042172 A 19971017; US 201213534531 A 20120627; US 29324799 A 19990416; US 3148608 A 20080214;  
US 60771603 A 20030627; US 87539001 A 20010606; ZA 979327 A 19971017